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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/661,967	09/14/2000	Ying Feria	PD-200108	9890

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HUGHES ELECTRONICS CORPORATION
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EXAMINER	
LY, NGHI H	

ART UNIT	PAPER NUMBER
2686	13

DATE MAILED: 03/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/661,967	FERIA ET AL.	
	Examiner	Art Unit	
	Nghi H. Ly	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ibanez-Meier et al. (U.S. Patent 6,151,308) in view of Mesecher et al. (U.S. Patent 6,289,004).

Regarding Claim 1, Ibanez-Meier teaches a communications system comprising: stratospheric platform (Fig. 1, Communication Platform 110) having a payload controller (Fig.3, Processor 310) and a phased array antenna having a plurality of elements for generating a first beam and a second beam (Fig. 1); a gateway station in

communication with the stratospheric platform (Fig.1, Destination Device 120-122, and Col.4, Line 64, communication gateways), the gateway station receiving a first signal having the first beam having interference from the second beam therein and receiving a second signal having the second beam having interference from the first beam therein (Col. 16, Lines 53-55).

Ibanez-Meier does not teach how the interference can be reduced or removed.

Mesecher, however, teaches that the gateway station comprising a first subtracting block for subtracting the second signal from the first signal to obtain the first beam, the gateway station comprising a second subtracting block for subtracting the first signal from the second signal to obtain a second beam (Mesecher, Col. 2, Lines 3-18; and Fig. 10, subtracting block 149; Although only one subtracting block is shown, it is inherent that by reversing the operation, signal from the narrow beam direction antenna can be improved by subtracting the signal from the main antenna from that of the narrow beam antenna).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to combine the teaching of Mesecher to that of Ibanez-Meier, so that communication channels could be more reliable when using the stratospheric platform structure.

Regarding Claim 2, Ibanez-Meier as modified by Mesecher teaches the gateway station weights the second signal with a first weight prior to subtracting the second signal from the first signal (Mesecher, Col.2, Lines 8-11).

Regarding Claim 3, Ibanez-Meier as modified by Mesecher teaches the gateway station weights the first signal with a second weight prior to subtracting the second signal from the first signal (Mesecher, Col.2, Lines 8-11; Fig.10 where a factor of 1 is used for the first signal).

Regarding Claim 4, Ibanez-Meier as modified by Mesecher teaches the first weight is a function of user position files (Mesecher, Col.4, Lines 16-29, wherein proper weights are obtained adaptively, where adaptive variation as a function of user position file is inherently implied).

Regarding Claim 5, Ibanez-Meieras modified by Mesecher teaches the payload controller comprises a demultiplexer for receiving control signals (Mesecher, Col.3, Line 26).

Regarding Claim 6, Ibanez-Meier as modified by Mesecher teaches the demultiplexer generates a plurality of element control signals (Mesecher, Col.3, Lines 24-28).

Regarding Claim 7, Ibanez-Meier as modified by Mesecher teaches the element control signals are coupled to an RF feed, and the RF feed is coupled to the plurality of elements of the phased array antenna (Ibanez-Meier, Col.6, Lines 43-45).

Regarding Claim 8, Ibanez-Meier as modified by Mesecher teaches the gateway station comprises a beam generator for generating beam signals (Ibanez-Meier, column 6, Lines 45-41), wherein device interfaces enable the generation of a beam which has a dynamically-shapeable geometry).

Regarding Claim 9, Ibanez-Meier as modified by Mesecher teaches the gateway station further comprises a multiplexes/demultiplexer (Mesecher, Col.3, Line 26).

Regarding Claim 10, Ibanez-Meief as modified by Mesecher teaches the multiplexes/demultiplexer comprises a code division multiplexes/demultiplexer (Mesecher, Col.2, Line 22).

Regarding Claim 11, Ibanez-Meier as modified by Mesecher teaches the gateway station is coupled to a terrestrial network (Ibanez-Meier, Col. 8, Lines 49-56).

Regarding Claim 12, Ibanez-Meier as modified by Mesecher teaches a communications system as recited in claim 11, wherein the terrestrial network comprises the Internet (Ibanez-Meier, Col. 14, Line 50).

Regarding Claim 13, Ibanez-Meier as modified by Mesecher teaches the terrestrial network comprises the public service telephone network (Ibanez-Meier, Col. 8, Lines 49-56, where terrestrial network usually includes a public service telephone network).

Regarding Claim 14, see Claim 1 for the teaching of Ibanez-Meier and Mesecher.

Regarding Claim 15, see Claims 2 and 3 for the teaching of Ibanez-Meier and Mesecher.

Regarding Claim 16, see Claim 1 for the teaching o f1banez- Meier and Mesecher.

Regarding Claim 17, see Claim 4 for the teaching of Ibanez-Meier and Mesecher.

Regarding Claim 18, see Claims 1-3 for the teaching of Ibanez-Meier and Mesecher.

Regarding Claim 19, see Claim 4 for the teaching of Ibanez-Meier and Mesecher.

Regarding Claim 20, see Claim 1 for the teaching of Ibanez-Meier and Mesecher.

Regarding Claim 21, see Claims 2 and 3 for the teaching of Ibanez-Meier and Mesecher.

Regarding Claim 22, Ibanez-Meier and Mesecher teach a method as recited in claim 21, wherein the at least one signal is associated with a mobile user (Ibanez-Meier, Fig. 15).

Regarding Claim 23, Ibanez-Meier and Mesecher teach a method as recited in claim 22, wherein the at least one other of the plurality of signals is associated with a mobile user (Ibanez-Meier, Fig.15).

Regarding Claim 24, see Claim 4 for the teaching of Ibanez-Meier and Mesecher.

Response to Amendment

4. Applicant's arguments filed 11/29/2003 have been fully considered but they are not persuasive.

On pages 2-4 of applicant's remarks, applicant argues that there is no motivation to combine the teaching of Ibanez-Meier in this mater to that of Mesecher or some other source of teaching for some other way of avoiding the unacceptable signal degradation and neither Ibanez-Meier nor Mesecher provide suggestions or motivation for the combination.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by

combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to do so found in the knowledge generally available to one of ordinary skill in the art. (It is in the knowledge generally available to one of ordinary skill in the art that the communication channels could be more reliable when using the stratospheric platform structure). In addition, applicant's attention is directed to the rejection of 1 above.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (703) 605-5164. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi H. Ly

02/02/04

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